

IN THE CLAIMS:

Cancel claims 1 to 9, without prejudice.

1. to 9. (Canceled)

10. (New) A method for determining a position of an end head used in rolls of packing paper, cellulose, or board relative to a grab transporting the end head, when the end head is attached to the grab, comprising:

transporting a detector along a circular curve assumed to be intersected by a circular curve defined by an edge of an end head;

measuring an angle position of the detector on the circular curve of its transport path;

detecting intersection points between the circular curve traveled by the detector and the edge of the end head;

calculating a position of a center point of the end head on the basis of:

- a) a radius of the circular curve traveled by the detector and the position of the center point of the circular curve traveled by the detector,
- b) a position of a tool point of the grab,
- c) an assumed radius of the end head, and
- d) positions of the detected intersection points; and

calculating a position of the center point of the end head in the set of coordinates of the grab.

11. (New) The method of claim 10, wherein the detector is transported at the first end of a measuring arm fitted to a rotation shaft of the grab, and the angle of rotation of the measuring arm on the shaft is measured.

12. (New) The method of claim 11, wherein the measurement of the angle of rotation of the measuring arm is calibrated by rotating the measuring arm towards a face at a predefined rotation-angle position until the face is detected and measurement of the angle of the measuring arm is set on the basis of this angle at which the face is detected.

13. (New) The method of claim 11, wherein a length of the measuring arm is calibrated with the aid of a calibrating end head, the radius of which is known and which is set in a predefined position on the grab.

14. (New) The method of claim 11, wherein the length of the measuring arm is calibrated with the aid of a calibration face formed in the grab, at the position of which a measurement result corresponding to the calibrating end head is obtained.

15. (New) An apparatus for determining a position of an end head used in rolls of packing paper, cellulose, or board relative to a grab transporting the end head, when the end head is attached to the grab, comprising:

- a grab comprising a body, elements for gripping an end head, and a predefined tool point;
- a measuring arm rotatable on a rotation shaft fitted to the body;
- a measuring device, operable for determining an angle of rotation of the measuring arm around the rotation shaft; and
- a detector attached to the measuring arm, operable for detecting passage of an edge of the end head over the detector.

16. (New) The apparatus of claim 15, wherein the rotation shaft of the measuring arm is disposed a distance from the tool point.

17. (New) The apparatus of claim 15, wherein the grab has a first calibration face parallel to the shaft of the measuring arm and to a predefined angle position on the circumferential path of the measuring arm.

18. (New) The apparatus of claim 16, wherein the grab has a first calibration face parallel to the shaft of the measuring arm and to a predefined angle position on the circumferential path of the measuring arm.

19. (New) The apparatus of claim 15, wherein the grab has a first calibration face arranged on the circumferential path of the measuring arm in such a way that detection corresponding to the edge of the end head is obtained at its position.

20. (New) The apparatus of claim 16, wherein the grab has a first calibration face arranged on the circumferential path of the measuring arm in such a way that detection corresponding to the edge of the end head is obtained at its position.

21. (New) The apparatus of claim 17, wherein the grab has a second calibration face arranged on the circumferential path of the measuring arm in such a way that detection corresponding to the edge of the end head is obtained at its position.

22. (New) The apparatus of claim 18, wherein the grab has a second calibration face, arranged on the circumferential path of the measuring arm in such a way that detection corresponding to the edge of the end head is obtained at its position.